

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1-16. Cancelled.

17. (Currently Amended) A method of administering resource utilization in a computer, the ~~computer~~method comprising:

~~a scheduling means having at least one method for processing reservation requests in accordance with at least one method for a plurality of differing resources of the~~a computer, wherein said scheduling ~~means is arranged to initiate~~s resource specific reservation processing; and includes at least one ~~reservation means having at least one~~ method for making reservations for access to a resource of the computer,

~~the method comprising:~~

running a first process to make a reservation for access to aone of said resources in dependence on a resource requirement communication from an application process, said application process calling a scheduling method ~~of the scheduling means, said scheduling method~~ taking a hardware independent ~~first~~first resource access requirement definition as a parameter and calling a reservation method ~~of the reservation means~~ to make a reservation for said application process using a hardware dependent second resource access requirement definition as a parameter;

running a second process to grant requests for access to said resource from said application process in dependence on said reservation, comprising running a resource specific scheduling process to grant access to a resource in dependence on the reservation ~~made by the reservation means~~ initiated by said ~~scheduling means~~ in said first process prior to said second process; and

utilizing said resource for the purposes of said application process.

18. (Currently Amended) A method as in claim 17 wherein said scheduling ~~means~~ translates the hardware independent first resource access requirement definition into the hardware dependent second resource access requirement definition.

19. (Currently Amended) A method as in claim 18 wherein said scheduling ~~means~~ is supported by a platform and said scheduling ~~means~~ translates said hardware independent resource access request definition to a second resource access request definition dependent on the properties of said platform.

20. (Previously Presented) A method as in claim 17 wherein said a second resource access request definition has a form suitable for use by at least one of the following:

a CPU reservation component of the computer; and
a memory reservation component of the computer.

21. (Currently Amended) A method as in claim 17 wherein said resource comprises a CPU of the computer, and said scheduling means is arranged to reserve access to CPU time for said application process using said second resource access requirement definition in advance of said step of granting a request for access to the CPU.

22. (Previously Presented) A method as in claim 21 wherein said hardware dependent second resource access requirement definition comprises a one-dimensional reservation request pattern which is merged with a one-dimensional CPU access control pattern, representing empty CPU access time slots and reserved CPU access time slots, without disturbing either the reservation request pattern or the reserved CPU access time slots in the reservation request pattern.

23. (Previously Presented) A method as in claim 22 wherein said merging step comprises relocating a non-empty time slot element of the reservation request pattern or the CPU access control pattern such that the patterns can be merged without any reserved CPU access time slot elements being deleted or overwritten.

24. (Previously Presented) A method as in claim 23 wherein the relocated non-empty time slot element is relocated by an amount defined in said time slot element.

25. (Currently Amended) A method as in claim 21 wherein in said one-dimensional CPU access control pattern, each element relates to a quantum of CPU access time, and wherein in said step of running the second process granting a request for

access to said resource from said application process in dependence on said reservation, said step of running a resource specific scheduling process to grant access to a resource comprises granting access to the CPU by performing the steps of:

at the end of a quantum of CPU access time;
granting access to any pending processes having a priority greater than a predetermined level; and then
if the next pattern element is empty then granting access to a pending process meeting a predetermined prioritization criterion else granting access to a process identified in the next pattern element.

26. (Previously Presented) A method as in claim 25 wherein pending processes populate queues having different priorities and access is granted to the process identified in the pattern element when there is not a populated process queue having a higher priority than the queue in which said process is present.

27. (Previously Presented) A method as in claim 20 wherein said memory reservation component comprises a mass storage device reservation component of the computer.

28. (Currently Amended) A method as in claim 27 wherein said resource comprises memory on said mass storage device and said scheduling means is arranged to reserve memory for said application process using said second resource requirement

definition in advance of said step of granting a request for access to said mass storage device.

29. (Currently Amended) A method as in claim 28 wherein when said ~~scheduler~~ scheduling makes a reservation and one or more resource tokens are allocated to said application process in dependence on the second resource access requirement definition, and wherein in said second process said step of granting a request for access to said resource, the step of running a resource specific scheduling process to grant access to a resource in dependence on the reservation ~~made by the reservation means~~ comprises:

- (i) storing requests for access to a mass storage device from application processes;
- (ii) generating randomly a resource token identifier; and
- (iii) if no application process has been allocated, said identified resource token then passes on to a mass storage device driver to process the stored request for access from an application process selected on the basis of a predetermined prioritization criterion, and otherwise:
said identified resource token then passes on to a mass storage device driver process a stored request for access from an application process to which said identified resource token was allocated.

30. (Currently Amended) A method as in claim 28 wherein when said ~~scheduling means~~ scheduling makes a reservation in said first process, a weighting

function associated with the application process is determined and in said second process, in said step of granting a request for access to the resource, the step of running a resource specific scheduling process to grant access to a resource in dependence on the reservation made by the reservation means comprises performing the steps of:

- (i) storing requests for access to a mass storage device from application processes;
- (ii) using a stochastic process, either selecting an application process with a probability determined by the weighting associated with the application process and passing on to a mass storage device driver process the stored request for access from the selected application process, or passing on to a mass storage device driver process a stored request for access from an application process selected on the basis of a predetermined prioritization criterion.

31. (Currently Amended) A method as in claim 20 wherein said memory is comprises random access memory and said scheduling means is arranged to ~~reserved~~reserve a minimum number of memory blocks in said random access memory in advance of said step of granting a request for access to said random access memory.

32. (Currently Amended)) A computer comprising:

a scheduling means having at least one method for processing reservation requests for a plurality of differing resources of the computer, wherein said scheduling means is arranged to initiate resource specific reservation processing; and

at least one reservation means having at least one method for making reservations for access to a resource of the computer,

said computer being configured to operate in accordance with a method comprising:

running a first process to make a reservation for access to one of said resources in dependence on a resource requirement communication from an application process said application process calling a scheduling method of the scheduling means, said scheduling method taking a hardware independent ~~first~~first resource access requirement definition as a parameter and calling a reservation method of the reservation means to make a reservation for said application process using a hardware dependent second resource access requirement definition as a parameter; and

running a second process to grant requests for access to said resource from said application process in dependence on said reservation, comprising running a resource specific scheduling process to grant access to a resource in dependence on the reservation made by the reservation means initiated by said scheduling means in said first process prior to said second process.

33. (Currently Amended) A data carrier containing computer code for loading into a computer ~~comprising~~including: a scheduling means having at least one method for processing reservation requests for a plurality of differing resources of the computer,

wherein said scheduling means is arranged to initiate resource specific reservation processing; and at least one reservation means having at least one method for making reservations for access to a resource of the computer, said computer code on said data carrier being configured to perform a method during its execution on said computer comprising:

running a first process to make a reservation for access to one of said resources in dependence on a resource requirement communication from an application process said application process calling a scheduling method of the scheduling means, said scheduling method taking a hardware independent ~~first~~first resource access requirement definition as a parameter and calling a reservation method of the reservation means to make a reservation for said application process using a hardware dependent second resource access requirement definition as a parameter; and

running a second process to grant requests for access to said resource from said application process in dependence on said reservation, comprising running a resource specific scheduling process to grant access to a resource in dependence on the reservation made by the reservation means initiated by said scheduling means in said first process prior to said second process.